



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/516,497	12/01/2004	Masahiro Goto	123767	4945
25944	7590	07/06/2006		
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			EXAMINER DO, ROBERT C	
			ART UNIT 2851	PAPER NUMBER

DATE MAILED: 07/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/516,497

Applicant(s)

GOTO, MASAHIRO

Examiner

Robert C. Do

Art Unit

2851

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 10-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/1/2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/1/05, 12/01/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: See Continuation Sheet.

Continuation of Attachment(s) 6). Other: Translation of JP 2002-169225, "The Fresnel lens" article.

DETAILED ACTION

Election/Restrictions

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-17, drawn to an optical member.

Group II, claim(s) 18 and 19, drawn to a process of producing an optical member.

The inventions listed as Groups I and II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: Group II claims the process in which to manufacture the claimed apparatus using a mold to shape the invention, where as the apparatus has no features of the mold.

If Group I is elected, Group I contains claims directed to more than one species of the generic invention. These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1.

The species are as follows:

Species I – Figure 2;

Species II – Figure 4;

Applicant is required, in reply to this action, to elect a single species to which the claims shall be restricted if no generic claim is finally held to be allowable. The reply

must also identify the claims readable on the elected species, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered non-responsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

The claims are deemed to correspond to the species listed above in the following manner:

Species I – Claims 1 through 9; Figure 2.

Species II – Claims 10 through 17; Figure 4.

The species listed above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons: Species I lacks the protrusion of Species II, while Species II lacks the concavities of Species I. During a telephone conversation with Mr. Jacob Doughty on June 8, 2006 a provisional election was made with traverse to prosecute the invention of Species I, claims 1 through 9. Affirmation of this election must be made by applicant in replying to this Office action. Claims 10 through 19 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 – 4 and 6 – 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Ono (Japanese Patent Publication Number 2002-169225).

Ono discloses an optical member containing all the claimed limitations of the claimed invention as follows:

- An optical element (Fig. 2) that changes an optical path of incident light, where the optical element is formed on at least one of the planes of incidence (Fig. 2, 3) and emergence (6).
- Part of the optical member selected from the planes of incidence and emergence has a plurality of minute concavities (Fig. 3) by which reflection of light incident on the predetermined part is prevented (Paragraph [0019], Line 7 of the translation).
- The concavities have a mean depth of .05 μm or more and .5 μm or less (Paragraph [0010], line 6), and a mean distance between neighboring two of the concavities is not more than .5 μm (Paragraph [0010], lines 4-6).
- The concavities have a mean radius in a direction of plane .5 to 2 times the mean depth of the concavities (Paragraph [0011], line 22 shows a range for the radius as .005 - .1 μm and Paragraph [0010], lines 6 shows a

range for the depth as $.05 - .2 \mu\text{m}$; Therefore it can be shown that a radius of $.1 \mu\text{m}$ and a depth of $.1 \mu\text{m}$ gives a ratio where the radius is 1 times the depth which is in the claimed range of .5 to 2 times).

- The concavities have a mean depth that is .2 to 2 times the mean distance between neighboring two of the concavities (Paragraph [0010], line 6 shows a range for the depth as $.05 - .2 \mu\text{m}$ and Paragraph [0010] lines 4-6 show that the distance can range from $.2 - .9 \mu\text{m}$; Therefore it can be shown that a depth of $.2 \mu\text{m}$ and a distance of $.2 \mu\text{m}$ would give us a ratio where the depth is 1 times the distance which is in the claimed range of .2 to 2 times).
- The optical member contains a plurality of minute protrusions in addition to the plurality of minute concavities (Fig. 3).
- The optical member where it is used for the purpose of a projection screen (Paragraph [0002], line 8).
- The optical element where incident light is allowed to follow optical paths approximately parallel to one another (Incident light that follows optical paths that are approximately parallel to one another is an inherent quality of a Fresnel lens which is the invention of Ono, see attached "The Fresnel Lens" article).
- The optical element where incident light is allowed to follow dispersed optical paths (Figure 2, incident light L1 is dispersed in different paths of L2, L3, and L4).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ono in view of van de Ven (U.S. Patent Number 5,005,945).

Ono teaches all the claimed parts of the claimed invention as show above.

Ono does not teach of an optical member where a laminar portion including with the concavities has a percentage of void of 20 to 50%.

However van de Ven teaches of an optical member that has concavities where the percentage of void is 20 to 50% (Fig. 2, 3, 4 and 5 show a screen with concavities and also show a width of b and height of h2 and h1. From that we can determine that the void of the screen is within 20 to 50%).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make screen of Ono have concavities where it has a percentage of void between 20 to 50% in order to control the amount of incident light reflected back.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert C. Do whose telephone number is (571) 272-1387. The examiner can normally be reached on Monday Through Friday, 8am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on (571) 272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RCD


JUDY NGUYEN
SUPERVISORY PATENT EXAMINER